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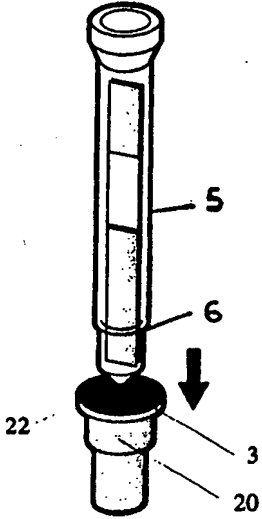
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| <b>(51) International Patent Classification <sup>6</sup>:</b><br><b>G01N 1/10, B01L 3/00 // A61B 10/00</b>  | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 98/15810</b><br><b>(43) International Publication Date:</b> 16 April 1998 (16.04.98)   |
| <b>(21) International Application Number:</b> PCT/US97/17878<br><b>(22) International Filing Date:</b> 3 October 1997 (03.10.97)<br><b>(30) Priority Data:</b><br>08/726,663 7 October 1996 (07.10.96) US<br><b>(71) Applicant:</b> SALIVA DIAGNOSTIC SYSTEMS, INC.<br>[US/US]; Suite G, 11719 N.E. 95th Street, Vancouver, WA 98682 (US).<br><b>(72) Inventors:</b> SCHRAMM, Willfried; 23000 N.E. Schauer Drive, Battle Ground, WA 98604 (US). BURGESS-CASSLER, Anthony; 5816 N.E. 58th Street, Vancouver, WA 98661 (US). HAISLEY, Charles; 2675 Stephens Road, Boulder, CO 80303 (US).<br><b>(74) Agents:</b> EAVES, James, C., Jr. et al.; Middleton & Reutlinger, 2500 Brown & Williamson Tower, Louisville, KY 40202 (US).  |           | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.</i><br><i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> |
| <b>(54) Title:</b> METHOD FOR COLLECTING SAMPLES OF LIQUID SPECIMENS FOR ANALYTICAL TESTING   |           |  |
| <b>(57) Abstract</b><br><p>A sample kit and a method for collecting a sample of a liquid specimen for analytical testing comprises a sample container and a reagent vial. The sample container includes an open end and a capillary end with a chamber disposed therebetween which includes analytical testing strips and the like within the chamber. The reagent vial is provided with a penetrable foil seal over an open end and a reagent therein for receipt of the capillary end of the sample container. The method for collecting a sample of a liquid specimen for analytical testing includes the steps of bringing the capillary end in contact with the liquid specimen to be analyzed and then penetrating the penetrable foil seal over the open end of the reagent vial wherein the sample container fits within the opening in the penetrable foil seal in an air-tight manner forcing the reagent within the reagent vial into the chamber in the sample container and thereby in contact with the analytical testing strips.</p>  |           |  |

Fig. 1

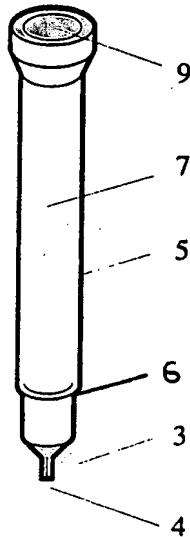


Fig. 2

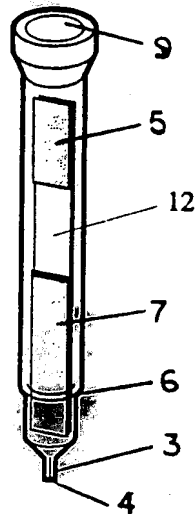


Fig. 3

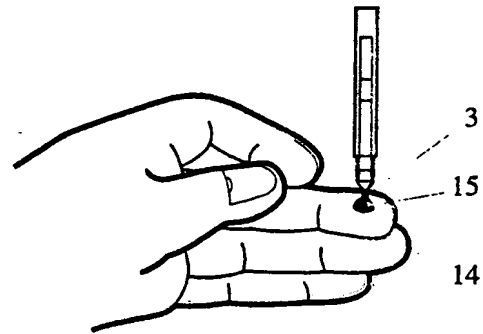


Fig. 3a

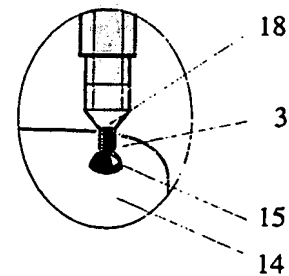


Fig. 4

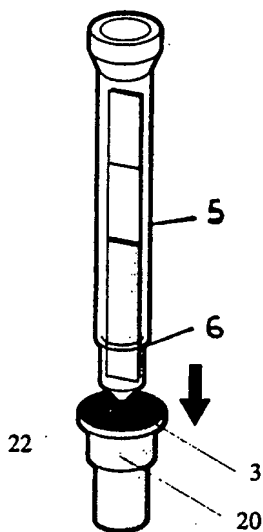


Fig. 5

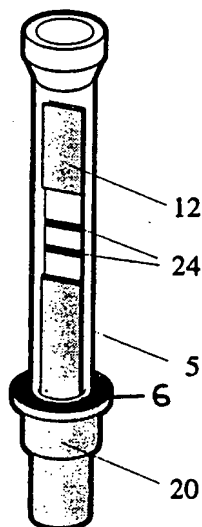


Fig. 6a

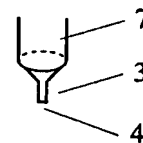


Fig. 6b

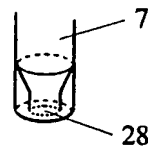


Fig. 6c

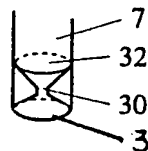


Fig. 7

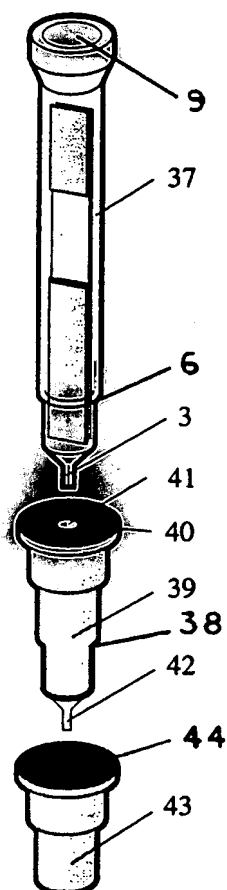


Fig. 8

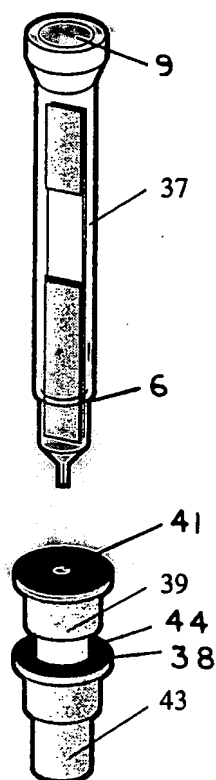
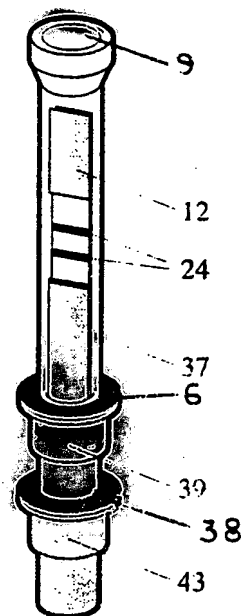


Fig. 9



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METHOD FOR COLLECTING SAMPLES OF  
LIQUID SPECIMENS FOR ANALYTICAL TESTING

Technical Field

The field of the invention relates to a method for  
5 collecting, processing, and analyzing a liquid specimen in a  
self-contained system. More particularly, this invention  
relates to an apparatus and method for collecting,  
processing, and analyzing liquid specimens in a self-  
contained system.

10 Background Art

Chemical and biochemical analysis of liquids has been  
traditionally performed in specialized laboratories.  
However, the classical methods of analytical chemistry have  
been increasingly replaced by automated analyzers designed  
15 for the processing of well-defined specimens. These  
procedures are typically still conducted in highly  
specialized institutions by technicians trained in operating  
particular integrated instruments. In the recent past there  
has been an increasing trend to develop devices for the  
20 analysis of specimens in the field by non-trained personnel  
to address a specific analytical or diagnostic problem. In  
fully integrated devices sample collection, processing, and  
analysis are combined in such ways that they are non-obvious  
to the user but deliver a final non-coded readout. The  
25 degree of integration of all the procedures required for  
full analysis may vary in the descriptions of prior art.

Several devices and methods have been described to  
collect liquid specimens by means of fibrous or other  
absorbent materials for subsequent processing and analysis.  
30 Greenspan (U.S. Patent No. 4,409,988) teaches an apparatus  
for collecting cultures where the specimen is taken up by  
the absorbent tip of a swab which is then transferred into a  
culture medium. In a similar fashion, Nason (U.S. Patent  
No. 4,987,504) describes a specimen test unit for which the  
35 biological sample is also collected with a swab. For the  
collection of a specimen for medical diagnosis, Schluter (EP  
0 382 905 A2) teaches the use of absorbent material for